

Contents of Volume XXXIX, Nos. 1-6, 1986

NUMBER 1, JANUARY

Complex Hill's Equation and the Complex Periodic Korteweg-de Vries Equations <i>B. Birnir</i>	1
Lyapunov Stability of Ground States of Nonlinear Dispersive Evolution Equations <i>M. I. Weinstein</i>	51
Optimal Random Coding <i>C. S. Peskin</i>	69
Singular Continuous Spectrum under Rank One Perturbations and Localization for Random Hamiltonians <i>B. Simon and T. Wolff</i>	75
A Uniqueness Theorem for an Inverse Boundary Value Problem in Electrical Prospection <i>J. Sylvester and G. Uhlmann</i>	91
Optimal Design and Relaxation of Variational Problems, I <i>R. V. Kohn and G. Strang</i>	113

NUMBER 2, MARCH

Optimal Design and Relaxation of Variational Problems, II <i>R. V. Kohn and G. Strang</i>	139
The Toda Flow on a Generic Orbit is Integrable <i>P. Deift, L. C. Li, T. Nanda, and C. Tomei</i>	183
Asymptotic Behavior of Solutions of Certain Parabolic Problems with Space and Time Dependent Coefficients <i>E. W. Stredulinsky, R. Meyer-Spasche, and D. Lortz</i>	233
Global Solutions of Nonlinear Hyperbolic Equations for Small Initial Data <i>D. Christodoulou</i>	267

NUMBER 3, MAY

Singularities of the Complex Korteweg-de Vries Flows <i>B. Birnir</i>	283
A New Iterative Method for Solving the Coefficient Inverse Problem of the Wave Equation <i>G. Q. Xie</i>	307
The Milne and Kramers Problems for the Boltzmann Equation of a Hard Sphere Gas <i>C. Bardos, R. E. Caflisch, and B. Nicolaenko</i>	323
Optimal Design and Relaxation of Variational Problems, III <i>R. V. Kohn and G. Strang</i>	353
Nonexistence Theorems for Singular Solutions of Quasilinear Partial Differential Equations <i>W.-M. Ni and J. Serrin</i>	379
Local Solvability of Overdetermined Systems Defined by Commuting First-Order Differential Operators <i>D. Yang</i>	401

NUMBER 4, JULY

Generalized Voronoi Diagrams for Moving a Ladder I: Topological Analysis <i>C. Ó'Dúnlaing, M. Sharir, and C. K. Yap</i>	423
Stabilization to the Standing Wave in a Simple Caricature of the Nerve Equation <i>H. P. McKean and V. Moll</i>	485
Explicit Solutions of the Viscous Model Vorticity Equation <i>S. Schochet</i>	531
The Neumann Problem for Equations of Monge-Ampère Type <i>P.-L. Lions, N. S. Trudinger, and J. I. E. Urbas</i>	539

NUMBER 5, SEPTEMBER

Shock Waves for Compressible Navier-Stokes Equations are Stable <i>T.-P. Liu</i>	565
Monte Carlo Calculation of Transport for Three-Dimensional Magneohydrodynamic Equilibria <i>F. Bauer, O. Betancourt, and P. Garabedian</i>	595

Symmetry and Phaselocking in Chains of Weakly Coupled Oscillators <i>N. Kopell and G. B. Ermentrout</i>	623
The Mass of an Asymptotically Flat Manifold <i>R. Bartnik</i>	661

NUMBER 6, NOVEMBER

On Algebraic Independence of Dirichlet Series <i>H. N. Shapiro and G. H. Sparer</i>	695
A Nonhyperbolic Cauchy Problem for $\square_b \square_c$ and its Applications to Elasticity Theory <i>V. Isakov</i>	747
Homogenization of Elliptic Equations with Principal Part Not in Divergence Form and Hamiltonian with Quadratic Growth <i>A. Bensoussan, L. Boccardo, and F. Murat</i>	769
Long Time Existence for a Slightly Perturbed Vortex Sheet <i>R. E. Caflisch and O. F. Orellana</i>	807
Complete Affine Hypersurfaces. Part I. The Completeness of Affine Metrics <i>S.-Y. Cheng and S.-T. Yau</i>	839
The Local Isometric Embedding in R^3 of Two-Dimensional Riemannian Manifolds with Gaussian Curvature Changing Sign Cleanly <i>C.-S. Lin</i>	867
Author Index	889
Volume Contents	v

NUMBER S, SUPPLEMENT

Foreward <i>C. Morawetz</i>	S1
Spectral Theory of Schrödinger Operators on Euclidean and on Non-Euclidean Spaces <i>S. Agmon</i>	S3
Elliptic Equations with Limiting Sobolev Exponents—The Impact of Topology <i>H. Brezis</i>	S17
A Harnack Inequality Approach to the Regularity of Free Boundaries <i>L. A. Caffarelli</i>	S41
Turbulence and Vortex Stretching on a Lattice <i>A. J. Chorin</i>	S47

The N-Body Problem in Quantum Mechanics	
<i>C. Fefferman</i>	S67
Free Boundary Problems for Minimal Surfaces and Related Questions	
<i>S. Hildebrandt</i>	S111
Long Time Effects of Nonlinearity in Second Order Hyperbolic Equations	
<i>F. John</i>	S139
Hecke Operators and Distributing Points on the Sphere I	
<i>A. Lubotzky, R. Phillips, and P. Sarnak</i>	S149
Vorticity and the Mathematical Theory of Incompressible Fluid Flow	
<i>A. Majda</i>	S187
Equations of Fluid Dynamics—Free Surface Problems	
<i>T. Nishida</i>	S221
Randomized Algorithms in Number Theory	
<i>M. O. Rabin and J. O. Shallit</i>	S239
On the Existence of Hermitian-Yang-Mills Connections in Stable Vector Bundles	
<i>K. Uhlenbeck and S. T. Yau</i>	S257

